Exercise 1 *The set of integers is the set* $\{\ldots, -3, -2, -1, 0, 1, 2, 2, \ldots\}$ *consisting of all counting numbers, their negatives, and zero.*

The floor *of* x*, denoted* $\lfloor x \rfloor$ *is defined to be the largest integer* k *with* $k \leq x$*. For example,* $\lfloor 5.2 \rfloor = 5$*,* $\lfloor -99.9 \rfloor = -100$ *and* $\lfloor -3 \rfloor = -3$*.*

(a) *The function* f *defined by* $f(x) = \lfloor x \rfloor$ *is*

Multiple Choice:

(i) *odd.*

(ii) *even.*

(iii) *neither odd nor even.* ✓

(iv) *both odd and even.*

(b) *The function* f *defined by* $f(x) = \lfloor x \rfloor$ *is*

Multiple Choice:

(i) *one-to-one.*

(ii) *not one-to-one.* ✓